

OKLAHOMA AGRICULTURAL EXPERIMENT STATION

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WINTER TREATMENT FOR HONEY BEES

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As soon as the honey flow for the season has ended, the bee's work for the year is over. The first killing frost in the fall generally indicates the close of the season, consequently the beekeeper can use the frost date as a criterion by which to prepare his bees for the winter.

Further north or in colder climates bees are packed in cellars, buried in the ground or stored in boxes packed with sawdust, chaff or similar material in order to prevent them from freezing to death. In the extreme south they are not given any winter protection. In Oklahoma our experiments indicate that paper wrapping is perhaps the most economical winter treatment. Hives located on well drained ground with a good wind break on the north side need not be moved. They should, however, be well wrapped with paper in order to prevent rapid internal changes in temperature.

PROCEDURE.—Many beekeepers are now using "double deckers," that is to say, two standard ten-frame brood chambers instead of one for each colony of bees. This is in accordance with the advice that is being sent out by this station. Our "College" bees give best results in "double deckers". In preparing them for winter each colony should be reduced to one brood chamber.

Proceed with the smoker and hive tool. Remove the brood chamber having the least amount of honey and bees. Remove any empty combs from the remaining hive and substitute full honey combs taken from the extra hive, also shake any bees that may be in the latter hive in front of the reserved hive so that they can join the main colony. Finally close the entrance so that only a few can have passage way.

If any reserved colony is found to be too small to winter well it should be joined to a large colony by "double decking." Place one sheet of news paper on top of the strong colony brood chamber and then add the weak hive. Within a few days they will have united and the upper hive may be removed.

In case any colony is found to have an inadequate supply of honey for the winter it should be fed. Honey reserved in the brood combs is the best food. If this is not available, use sugar and hot water, equal parts by measure.

Eight pounds of sugar (one gallon) and ten pounds of water (one gallon) will make eighteen pounds of syrup. A normal colony will require upward of forty pounds of feed for the winter. In case a ready-made feeder is not easily available, make one. A friction-top syrup can with four-penny nail-holes in the lid, inverted on the brood frames, pro-

tected by an empty brood chamber and cover will serve as a feeder.

After all needy colonies have been fed, united and arranged in single brood chambers, they should be wrapped for the winter.

METHOD OF WRAPPING.—Twelve ordinary sheets of news papers, two by three feet, are sufficient for each hive. Use a pad of four sheets for each side and two folded lengthwise for each end.

Proceed by removing the hive cover. Place a pad of four sheets and hold against the side of the hive with the knees, then fold the ends, as shown in Fig. 1. Bring the top of the side down and hold in place with a brick or other convenient weight. Proceed with the opposite side of the hive in the same manner. The two pads will over-lap on the top board. Two pads of two papers folded lengthwise will suffice for each end and will over-lap on top. See Fig. 2. The weight should be removed and the cover firmly pressed on without tearing the papers. The lower edge of the papers may then be held tightly in place by means of a twine string. A secondary binder should be used between this binder and the cover, as shown in Fig. 3.

The side papers will fit nicely if two incisions, about two inches long and one inch apart, are made for the projecting upper side of the bottom board on each side of the entrance. See figures 2 and 3.

Wrapped as advised, the bees will withstand changing temperatures nicely. When the honey flow comes in the spring they can proceed without being disturbed. When necessity for work increases, the entrance can be opened without bothering the main paper protection. Finally when all danger from late frosts is over, the twine strings can be severed, the papers removed and destroyed without interfering with the bees.

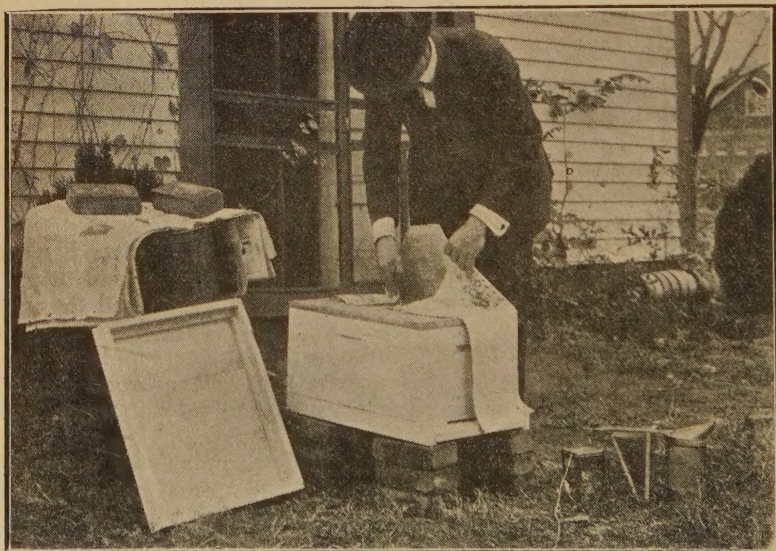


Figure 1



Figure 2

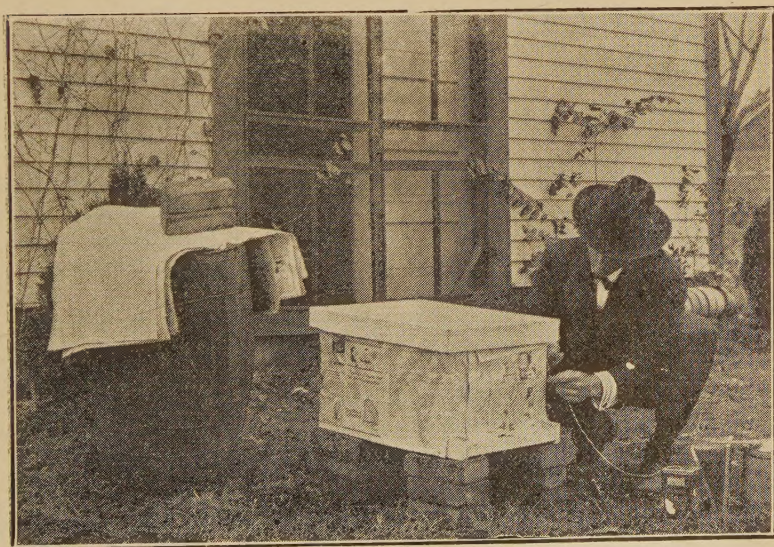


Figure 3

SIDE LIGHTS.—Slightly damp paper can be manipulated better than dry paper.

The binding twine can be conveniently used by drawing from the ball through a hole in a tin can, as shown in figures 2 and 3.

In tying the cord, turn the free end around the string twice before tightening. This kind of a knot will not easily slip before tying is finished.

Tie the knot at a hive corner as shown in figure 3.

An elastic band with a hook and loop is a convenient article for encircling and holding the paper pads in place on each hive preparatory to the folding and winding process. This can be easily made by tying a few rubber bands and cords together. After ascertaining the proper length for tightly encircling the hive, a wire hook can be tied on one end for attaching to a loop at the opposite end.

Almost any kind of a hive can be wrapped. The top can ordinarily be covered with a pad of papers with the outer edges overlapping the side pads so as to shed water and also retain the internal heat satisfactorily.

Honey bees do not hibernate. They generate heat when necessary by physical action, consequently they must have food for developing energy.

Preceding cold weather they converge very closely together, thus forming what is known as a winter nest. This "bee nest" should not be disturbed.

Although it is best to wrap the hives before the winter nests are formed, they may be wrapped at any time without creating a disturbance.

White sweet clover is the best honey bee plant thus far known for Oklahoma.